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### Re-finding the 'human side' of human factors in nursing

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# **RE-FINDING THE ‘HUMAN SIDE’ OF HUMAN FACTORS IN NURSING: HELPING STUDENT NURSES TO COMBINE INDIVIDUALISED CARE WITH THE RIGOURS OF PATIENT SAFETY**

## **Summary**

In this paper the authors explore the centrality of both patient safety and patient centred care when preparing learner nurses for their role. By examining these two goals against the understanding of human factors, the concept of risk and the interpersonal elements of patient centred compassionate care, the authors identify the challenges that nurse educators must recognise in preparing the nurses of the future who must achieve both.

## **Key words**

Human Factors, risk, nursing, nurse education, nursing student, patient centred care

## **INTRODUCTION**

Nurses have always had their patients’ safety at the forefront of their decision making. Increasingly this concern for safety has been formalised and researched under the scientific discipline of Human Factors. Grounded in safety science and bringing together such diverse subjects as engineering, biomechanics, industrial design, psychology and statistics, the notion of Human Factors addresses the complexity of human engagement with the environment and seeks to analyse the interactions which structure behaviour in the workplace. This discipline demands both an understanding of how people make decisions and behave and how to design safe and effective systems within which individuals work, whereby performance can be enhanced and the risk of error: poor decisions, poor performance is minimised.

In health care, the evidence of adverse events has been salutary (Vincent et al 2001, DH 2012) and great efforts have been made to enhance patient safety by the establishment of various patient safety agencies, boards and programmes. The complexity of achieving optimal outcomes has not gone unrecognised and is encapsulated in Alexander Pope’s (1688-1744) truism that “to err is human...” In nursing education, the notion of patient safety has run like a red thread through all aspirations for best practice. However, there is now a real opportunity to include the understanding of human factors in to both pre and post registration

educational curricula whereby awareness of the reality of human factors will facilitate the finding of best solutions or, as so often pithily stated, ‘make it easy to do the right thing’. Often the answer is seen to lie in standardisation and simplification (Norris et al 2012) but the question arises as to whether this can also allow for the heart of nursing to be fully expressed: the provision of holistic, individualised, patient centred care. In this paper the focus is on the needs of the student nurse learning the skills of ‘best practice’ and how to enhance both patient safety and compassionate patient centred care.

When learners are asked why they want to be nurses, many will say that they want to help people, care for people and have patient contact. Patients also value the human touch and personal contact of nurses, wanting to be cared for as individuals and looked after by nurses who care about their specific stories and situations. In addition, and as part of their caring ethos, the learner nurse’s concern is for their patient’s wellbeing and safety. This is evident from their earliest encounters and can be a source of ongoing student nurse anxiety. They openly fear that they might do something wrong that could cause harm, reflecting so clearly the words of Florence Nightingale 1859 “the very first requirement in a hospital, that it should do the sick no harm.”

Arguably, one of the challenges in nursing today is bringing together these two approaches into a style of nursing which ensures safety within a large organisation such as the National Health Service (NHS), whilst at the same time ensuring the integrity of the nurse and the person-centred care of the individual patient.

### PATIENT SAFETY AND HUMAN FACTORS

On first hearing the expression, it is easy to believe that ‘human factors’ merely reflects all those things about being human that affects what we do but this would deny the truly theoretical underpinnings of human factors research. However, at a practical level, it is helpful to have a succinct definition for example: the things that enhance or reduce human performance in the workplace. To understand fully the importance of the interaction between the human element and the other elements of an environmental systems and processes, is the business of ergonomics (HFES 2000). It is more than just understanding about the people, their capacities, attributes and frailties; it is also about using what is known about people to

design safer and more effective systems and processes within safer and more supportive environments. So to understand the achievement of harm free care of patients requires both thinking about people and thinking about systems (Noble et al 2012).

Understandably in patient care, although health care professionals are always looking to enhance care, there needs always to be the recognition and understanding of any form of human frailty that might reduce the performance of best care. Indeed, more recently this has been closely examined in relation to such as information processing, memory, the quality of clinical decisions made, situation awareness, the type of clinical leadership employed, teamwork and, fundamentally, the quality of the communications made within the team and with the patients and their families (Reason 1990, Flin et al 2008). Factors that are well known to impair performance are fatigue, any form of stress and distress, and role uncertainty and ambiguity. However, this reality in relation to ensuring optimal care, is often compounded by a reluctance to speak up when poor care is observed for fear of some sort of retribution or it being seen as not being 'their place' in the hierarchy so to do. These factors are often identified as the non technical skills affecting performance, factors that, notably, can affect both the novice and the expert (Reason 1990, Flin et al 2008).

Against this is the recognition that patient care is set in increasingly complex systems and if the known risks of human error are to be minimised, systems in all their complexity must be designed to be safe, effective and efficient (Norris et al 2012). Equally when problems occur and safety is compromised, there is a need to learn from this and find solutions, In this way mistakes are not condoned but are recognised in a constructive way in order to understand, find means to minimise, and thereby improve care.

### ENTERING THE ARENA OF NURSING

It is a great privilege, as educators, to witness the growth, sometimes transformation, of many nursing students undertaking pre-registration education. In their early days the students often bring naïve enthusiasm for the nurse's role and a refreshingly unchecked, sometimes indignant, view of what high quality care might look like and how patients' rights should be upheld. By graduation and registration these individuals have developed a sense of their own approach to the nursing role and have gained knowledge and skills which help them to grow into the role of qualified nurse. The students' learning experiences necessarily temper the

initial naïve enthusiasm but replaces it with a more considered optimism and, in many cases, a much more in depth understanding of the opportunities and challenges posed by a nursing career in the twenty first century. The move from ‘novice to expert’, much heralded in nursing (Benner 1984), is truly personified in many of those students who pass through the doors of nurse education. However, knowledge and skills are not all that they gain within nurse education. The cultures and expectations, rules of the workplace both written and unwritten, values and ideals are all part of the education offered, often tacitly, to our students.

### Learning about patient safety

Some of the dominant themes which are introduced to students prior to their first patient contact are necessarily those surrounding patient safety and risk. For example, early manual handling education highlights the importance of efficient movement for the safety of both patients and staff. Legislation surrounding this important topic is discussed and students are left with clear guidelines about moving patients in a way which ensures safety as well as maintaining dignity and comfort. These guidelines and others like them, are designed to help nurses practise well and strongly demonstrate the importance of adhering to protocols to ensure safety. They can, however, also prove daunting and unfamiliar to the novice nursing student.

In early placements a multitude of new and unfamiliar roles bombard the student nurse and it is easy to become overwhelmed. New students are constantly encouraged to ask for help, not to tackle tasks with which they are unfamiliar, to observe practice by mentors before undertaking procedures on their own. This advice is offered in a supportive manner and is designed to ensure that students take time to ‘find their feet’, observing those more experienced and putting their academic knowledge together with their practice observations before starting to act on their own. However, the prevailing culture of risk can also lead to a degree of paralysis. Students sometimes feel that they dare not do even the simplest of tasks without reference to qualified staff or more senior student colleagues. Fear of making a mistake, however small, can be a powerful motivator for a student and can lead to restricted performance and progress, particularly in early placements (Steven et al., 2013). All too often mentors describe students who will not undertake even relatively simple roles unaccompanied, preferring instead to observe the mentor for fear of making a mistake. Wrongly this may be perceived as lacking motivation or worse, avoiding care responsibilities. However, when asked, these students are more often very aware of the importance of their

new role and the most conscientious individuals who want to do the very best for their patients. Indeed many of these students speak with huge commitment about patient care and approach the start of their nursing career with a wholehearted desire to care effectively and with full compassion for individuals and their families.

### Safety and individualised care

Further into their education, students can struggle to reconcile notions of patient-centred, individualised care with the standardised care pathways and paperwork encountered in practice. They are well aware of the importance of putting the patient first, becoming effective advocates for their patients, supporting families and designing care to take account of individual patient needs. However, they are faced with the day to day challenge of a myriad of required activities all of which, to ensure patient safety and wellbeing, must be fully and effectively documented. These come to shape a busy day in a hospital ward. Indeed, student nurses preparing to work in the 'real' world of nursing today must experience the challenges and constraints of the system in which they will work. The study of human factors offers much to these situations and has helped hospitals to develop systems which seek to ensure safe and efficient practice within the constraints of the busy hospital system. Indeed, simple notions such as the 'surgical pause' a brief pause before surgery to enable safety checks to be made. Chariton (2004, WHO 2008) can be translated to good effect into nursing care. Documentation, guidelines and continuing professional development arguably all help to make it 'easy to do the right thing'. Nurses are urged to ensure that practice is 'safe, effective and patient centred', an aim with which nobody would disagree. Student nurses learn that safe and effective practice is their goal and this is at the forefront of their learning throughout their education.

The challenge facing both student nurses and educators is the potential dichotomy between ensuring patient safety whilst always seeking to give care that is truly individualised. Fear of making mistakes, a need to follow guidelines and the desire of a new student to 'follow the rules', as Melia (1987) identified as long ago as the 1980s, are still powerful determinants of practice. However, as students develop they start to encounter challenges where guidelines may not suit individuals and patients' wishes may differ from the recommended course of action. Individualised care starts to sit uncomfortably with the rigours of standardised approaches to practice. A simple example can be seen in the meeting of personal hygiene

needs where the patient wishes to shower in privacy and his falls risk assessment suggests otherwise. The need to ensure safety is paramount, indeed Florence Nightingale's remark, noted earlier in the paper; "the very first requirement in a hospital, that it should do the sick no harm." will forever resonate in the minds of and the culture surrounding nurses. However, the more recent drive to ensure that individuals enjoy care which is truly centred around their own needs and wishes, leaves student nurses and nurse educators with a dichotomy which challenges nurse education to the core. The recent appalling failures in patient care revealed in the Francis Inquiry serve only to reinforce the concern both for the lack of patient safety and the lack of patient centred care. Robert Francis stated from his report (Francis, 2013):

"I gave a set of recommendations designed to change the culture of the NHS, to put patients at the centre, a culture which puts patients and their safety first... It is so important these recommendations are implemented. That is why I recommended every organisation in the NHS should publish to what extent they want to take on the recommendations and then consider reviewing it regularly." Robert Francis QC 8.2.13

In addressing this, it is necessary to consider how the lessons from such as the Francis Inquiry, from human factors research and from guidelines which shape nursing practice, relate to nurses' relationships with patients. It could be argued that care which has safety as a primary focus is, by its very nature, person-centred. Nobody would argue that safety should be anything other than a central consideration in the decision making processes around the care of a patient. However, to limit clinical decisions to aspects of safety or to consider safe care to be necessarily optimum care would be an over simplification of the complexities of individualised patient care. The following sections seek to explore these complexities further and to consider how educators can help to develop students' thinking in order to prepare them for the conundrums which they may face in their own nursing practice.

### Safe but sanitised education?

As nurse educators there is an obligation to ensure that the knowledge base provided for student nurses is up to date and relevant to the care giving and service demands for which they are being prepared. Curricula are updated and revised regularly in line with regulatory requirements and taking account of the most recent developments in healthcare research. 'Human factors' does not currently feature directly in the curriculum but there have been

calls for its incorporation into both undergraduate and post graduate curricula (Paterson-Brown, 2011). However, the lessons taken from the growing body of human factors research have emerged as a key to the literature addressing safe practices, systems analysis and the use of such as pathways through health care services. As such, the ideas emerging from the study of human factors have tacitly started to become influential determinants of practice. Processes have become streamlined in hospitals and documentation reflects the need to assess risk, guard against errors, and provide evidence of systematic attention to detail (Norris 2009; Russ et al., 2013).

However, it could be argued that these tightly managed systems or pathways which patients follow could stifle the creative approaches of nurses. Indeed, the same could be said for nurse education where regulatory demands shape much of the detail of pre-registration education. Much is said about the need to ensure individualised patient care but less is said of individualised nursing. Nurses each bring their own personality and style to their care and form relationships with patients which use all of their individual skills and approaches. The 'standardize and simplify' mantra of human factors is an effective approach to improving safe practice and eliminating risk but it may also lead to a culture of standardised care. This care, whilst maintaining essential safety, may restrict the ability of nurses to care for individuals and their families in the most responsive way. This issue leads us to consider the whether ensuring safety is sufficient to meet what patients need and expect of nursing care.

#### Safe but sanitised care?

A simple answer to this question might be 'Of course'. Patients expect high quality care to be safe, accurate and effective. The definition of 'patient safety' is, however, unclear. In terms of human factors, safety is described in terms of optimising processes, minimising risk and maximising efficient, accurate performance. These aims are entirely appropriate to the NHS and nurses could learn much from this field of study. Arguably, the question is less about whether we need the streamlined, efficiently organised and well documented processes as, almost certainly, these improve patient care. The question which challenges more is whether enhanced, safety conscious care is 'enough' for patients. Is it enough to provide care which is simply safe without having the unique individual variation which personalises the care and softens the edges of the experience for people. The vision of 'crisp white' standardised care may appeal in terms of equality, safety and may even help to measure and ensure standards.



However, it is rarely the form filling and rigours of protocols which allow patients the positive experiences they often enjoy with nurses. These experiences add 'colour' to the 'crisp white' picture and individualise the interaction between nurse and patient. There is no doubt that there can be person-centred care given alongside the use of guidelines and protocols but, at its most extreme, the focus on patient safety can lead to 'sanitised' care which may be safe but may not meet all of the patient's needs.

### Defining safety and considering risk

Individual views of safety vary considerably and everyone accepts the reality of different levels of risk in their lives. Individuals make choices in their lives about the risk that they will accept. For example, taking up sky diving or completing a parachute jump are acceptable to some but not to others. While nobody would advocate nurses pursuing practices which are considered unsafe or providing care which does not meet the rigorous standards which guidelines lay out, the realities of day to day practice raises many questions about risk and risk assessment which nurses need to consider.

The concept of risk is understood and perceived differently across a range of discipline (Clarke 2006). Nurses bring together objective medical visions of risk alongside social constructs and understandings from lay people and patient perspectives. Risk and the assessment of risk is a central plank of professional judgement and decision making. Simple constructions of risk which seek to maximise safety and reduce error, in line with human factors literature, are important in a healthcare context. However, these conceptualisations fail to take adequate account of personalised and interactional aspects of risk. Clarke et al., (2011) highlight the need for nurses to further develop skills in assessing and managing psychological and interpersonal risk. Human factors education and a focus on standardising documentation and simplifying systems may help practitioners to mitigate physical risk. However, the value in much of healthcare comes from the interpersonal collaborations and experiences that people have and thereby hangs our quest to re-find the 'human side' of human factors. Each individual has their own personal construction of risk. These incorporate individual experiences and tastes, personal priorities and perceptions of one's own aspirations and responsibilities. These constructions are not made in isolation. Clarke et al., (2010) discuss the 'contested territories' of risk, highlighting the ways in which patients, family members and practitioners may amplify or attenuate risk assessment in line with their own

personal conceptualisations of the situation. Mitty and Flores (2008), recognising the tension between self determination and safety in caring for older people, argue cogently for the notion of negotiated risk agreements (NRA). The challenge for nurses is therefore the bringing together the formal processes of risk assessment and the person-centred approach which is seen to promote optimum and personally life affirming care.

In the field of health care, the general population may not have the expertise to make decisions for themselves about what is safe practice or otherwise. However, individuals are experts in their own lives and can negotiate risk effectively in partnership with nurses. One example of the effectiveness of this approach can be found, for example in the negotiated risk assessment which takes place between nurses and families where an older or confused individual.

#### Preparing for a dual role

“The needs and aspirations of the service user ... should be central to any care processes, especially risk assessment which is bound up with concepts of self determination, independence, rights, responsibilities and dignity (Steven et al., 2012 p207).” This statement from a recent text, *Nursing Older Adults*, highlights the all pervading and personal nature of risk assessment and the potential which exists to negotiate this and other aspects of care. Herein lies the key to addressing the challenge for nurse educators which exists around ensuring that student nurses are prepared for their dual roles of ensuring patient safety whilst also addressing individual needs. Through practice learning the students become familiar with procedural aspects of risk assessment, form filling and the recording of assessment scores. They quickly learn when to trigger requests for expert input, pressure relieving mattresses or nutritional supplements through the use of clinical risk assessment tools. These tools and systems, developed through the use of human factors research, can effectively address aspects of physical risk. The focus for educators must now be to equip nursing students with the skills and techniques necessary to address the gap in the assessment of psychological and interpersonal risk recognised by Clarke et al., (2011). Students need to be taught the value of gathering information about a person with a view to upholding that individual’s personal vision for their own life. They need to be given the tools with which to assess and consider the psychological and personal risks individuals face. These tools must come in the form of a deeper understanding of dignity, autonomy and individuality. Student nurses have long been taught about their role as patient advocate and about the importance of person-centred care and individual care planning. However, against the backdrop of

increasingly standardised pathways of care and, arguably, an over-riding focus on tools, checklists and procedures designed to ensure patient safety, nurses must re-find the compassion in nursing care. By addressing the psychological and interpersonal aspects of patient assessment as well as the physical and systematic elements, nurses can provide truly holistic care.

### CONCLUSION

Human factors research offers much to the development of procedures and systems which increase patient safety. This contribution cannot be underestimated and should indeed be more prominently acknowledged in the undergraduate nursing curriculum. However, the 'standardise and simplify' mantra has the potential to undermine creative and individualised nursing care. Nursing students are challenged by the perceived dichotomy of their role in performing standard assessments, using checklists and tools, providing evidence of safe and effective care, while at the same time being asked to address specific patient needs. Educators must challenge students to consider safety in a more holistic way, encouraging students to think beyond the checklist and into the more challenging areas of personal integrity, individuality and autonomy. Students should be asked to consider the true risk to a patient of being asked to follow a path which is not necessarily of their choosing, or to take an approach to treatment or recovery which is contrary to an individual's personal worldview. This territory is not entirely foreign to nursing students as ethical discourse is already central to undergraduate nurse education (Doane, 2004; Stagg 2010). However, the explicit consideration of safety in a wider context and specific exploration of wider constructions of risk in terms of interpersonal and psychological risk must be addressed in detail. Only through development of thinking in these areas can the nurses of the future develop the tools which will help them to make decisions and support individuals in their own nursing practice. The attention to detail and analysis of systems integral to human factors research may not, in itself have, addressed the interpersonal elements of person-centred nursing but the interrogation of a process which the discipline requires has allowed it to become clear where nurse educators must now focus their attentions in order to adequately prepare nurses of the future.

